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Nota di contenuto	Contents ; Preface ; Chapter 1 Introduction ; Chapter 2 Experimental Facts ; 2.1 Aharonov-Bohm Effect ; 2.2 Conductance Fluctuations ; 2.3 Localization ; 2.4 Quantum Hall Effects ; 2.5 Quantum Dots ; Chapter 3 Basic Theoretical Models and Tools 3.1 Relevant Scales and Observables 3.2 The Independent Electron Approximation ; 3.3 Model Hamiltonian and Green's Function ; 3.4 Disorder Diagrams and Field Theory ; 3.5 Scattering Matrix Modeling ; 3.6 Fokker-Planck Equations ; Chapter 4 Idealized Systems ; 4.1 Localized Systems 4.2 Delocalized Systems 4.3 Random Matrices and Symmetry ; Chapter 5 Towards Realistic Systems ; 5.1 Concept of Scaling ; 5.2 Distributions and Typical Values ; 5.3 Corrections at Finite Conductances ; 5.4 Quasi-One-Dimensional Systems

Chapter 6 The Localization-Delocalization Transition

6.1 Finite Size Scaling

; 6.2 Real-Space

Renormalization

; 6.3 Multifractality of Critical

States

; 6.4 Point-Contact Conductance

; 6.5 Order Parameter and Scaling Variable

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Sommario/riassunto

The quantum phenomena of tunneling and interference show up not only in the microscopic world of atoms and molecules, but also in cold materials of the real world, such as metals and semiconductors. Though not fully macroscopic, such *mesoscopic* systems contain a huge number of particles, and the holistic nature of quantum mechanics becomes evident already in simple electronic measurements. The measured quantity fluctuates as a function of applied fields in an unpredictable, yet reproducible way. Despite this fingerprint character of fluctuations, their statistical properties are univer
